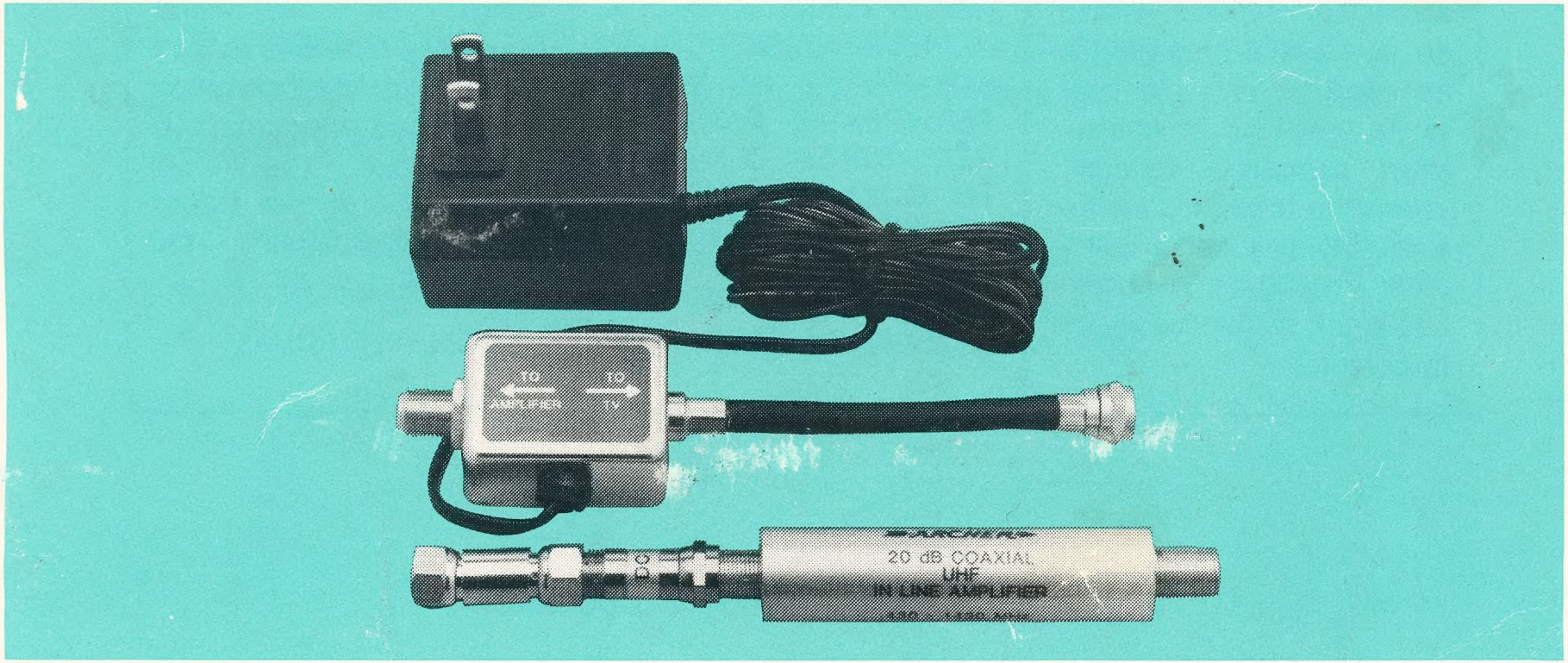
OWNER'S MANUAL

Cat. No. 15-1115

UHF/SATELLITE (LNB) 20 dB COAXIAL IN-LINE AMPLIFIER

PLEASE READ BEFORE USING THIS EQUIPMENT



ARCHER®

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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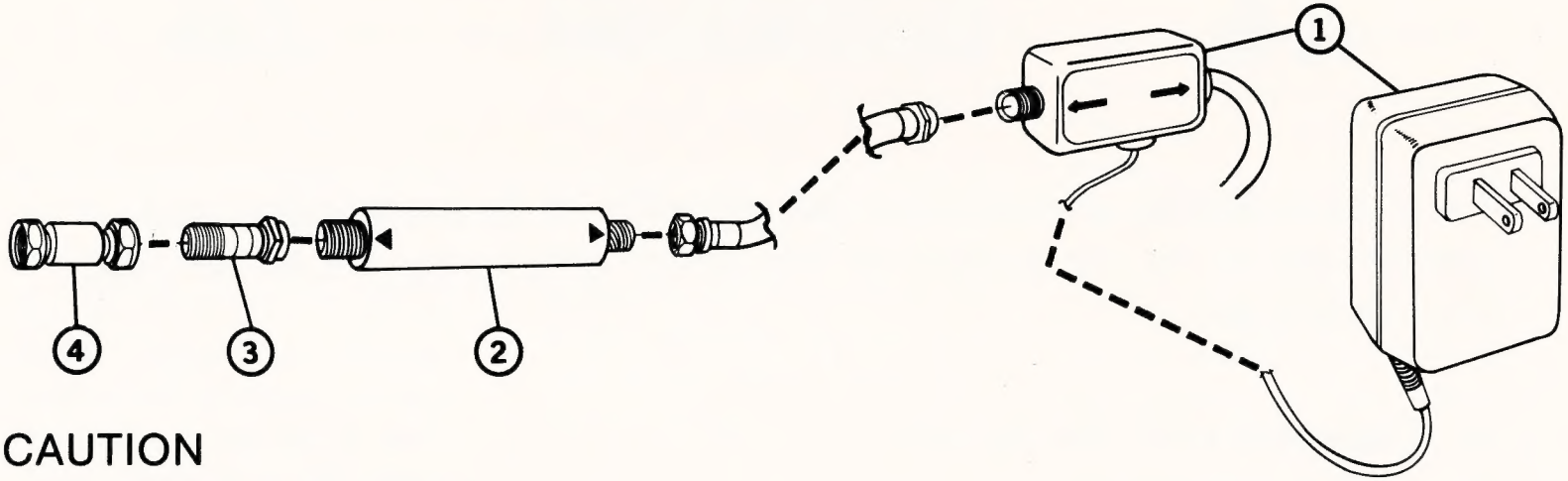
The ARCHER® UHF/Satellite (LNB) 20 dB Coaxial In-Line Amplifier will reduce or eliminate loss of signal due to extremely long cable or the use of multiple splitters. And because it is tailored to the 430 to 1430 MHz range, it is ideally suited to supply the amplification required when your satellite dish site is some distance from your receiver or when your HSTV system is comprised of many slave receivers within your household.

Its unique design enables it to be versatile in its installation and convenient in its placement for maximum efficiency. It can be used primarily with:

- Standard UHF TV signals
- UHF Scanners
- Satellite Systems with an LNB or Block Converter

The In-Line Amplifier is comprised of four parts:

1. AC adapter and power distribution module
2. In-Line Amplifier
3. DC Block
4. Male/Male F connector adapter



CAUTION

Because the In-Line Amplifier uses the coaxial cable to carry the TV or UHF radio signal as well as the DC power required for operation of the amplifier, proper connections are crucial. Casual installation or failure to exactly follow the connection instructions in the manual may result in damage to your amplifier and/or your TV, satellite receiver or UHF scanner.

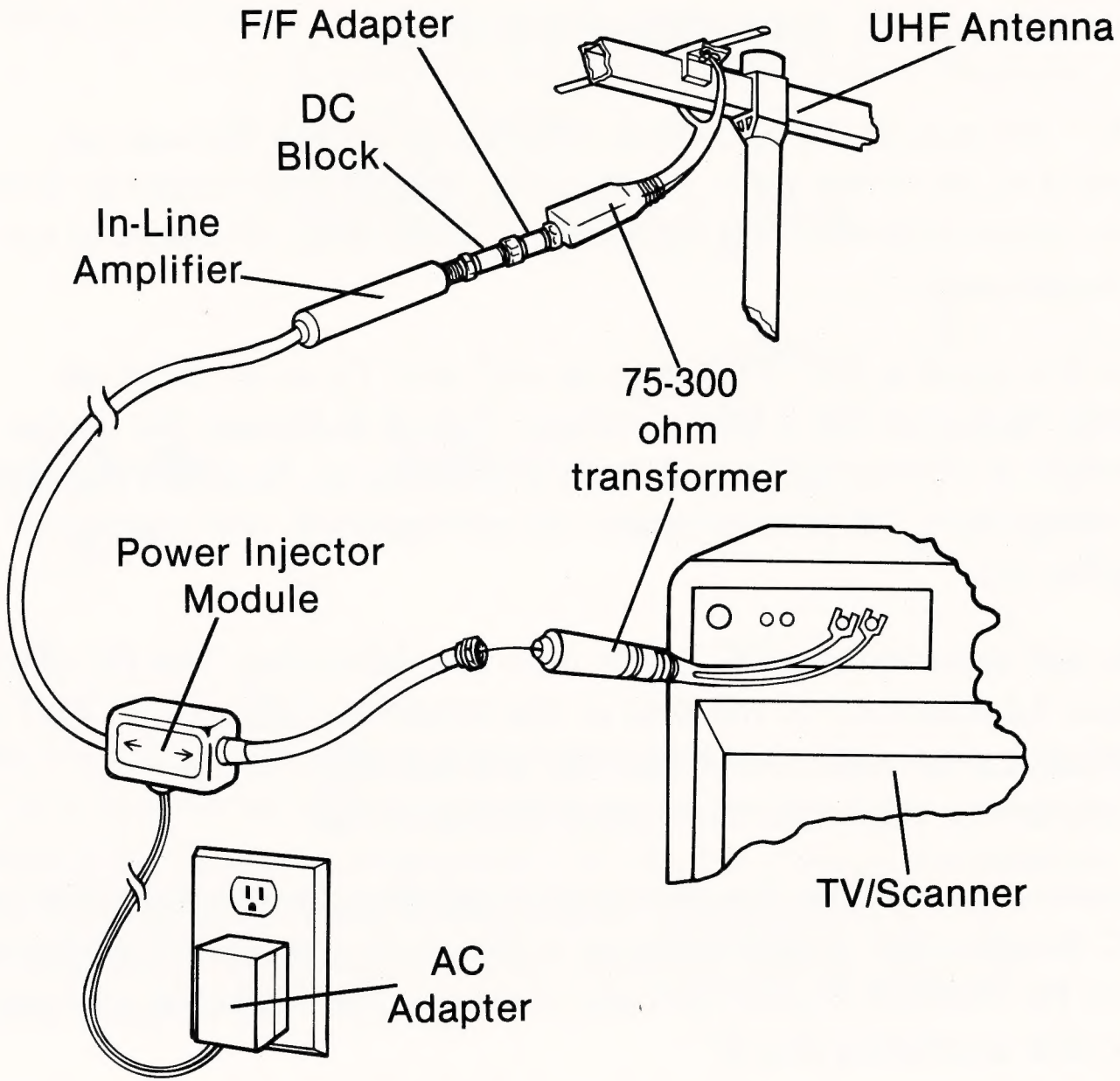
ONE ANTENNA TO ONE RECEIVER SYSTEM

NOTE: All regular TV antennas referred to in this manual are assumed to be of the UHF variety only. Use of this Amplifier with combination UHF/VHF/FM antennas or VHF only antennas is not recommended.

If you are using a UHF TV antenna with one TV or an external antenna designed for a UHF scanner, Figure A shows the proper assembly of components and their connections. To avoid damage to any component, be sure to check all connections with particular attention to:

1. Do not separate the DC Block from the Amplifier. The DC Block must be attached to the end of the Amplifier labeled TO ANT and should be between the Amplifier and the 300 - 75 ohm transformer (Cat. No. 15-1140) at the antenna.

2. Observe and follow the connection labeling on the Amplifier and DC Block units. If connections to the ends marked TO ANTenna and TO POWER INJECTOR are reversed, the Amplifier will not receive operating power.


F/F Adapter
UHF Antenna
DC
Block
In-Line
Amplifier
75-300
ohm
transformer
Power Injector
Module
TV/Scanner
AC
Adapter

3. Observe and follow the connections labeling on the Power Injector Module, TO TV and TO AMPLIFIER. Your TV or similar unit may be damaged if these connections are reversed in hook-up.

4. If your TV requires a transformer to enable connection of 75 ohm coaxial cable to the UHF screw terminals, the transformer (Cat. No. 15-1140) must be installed between the TV terminals and the Power Injector Module.

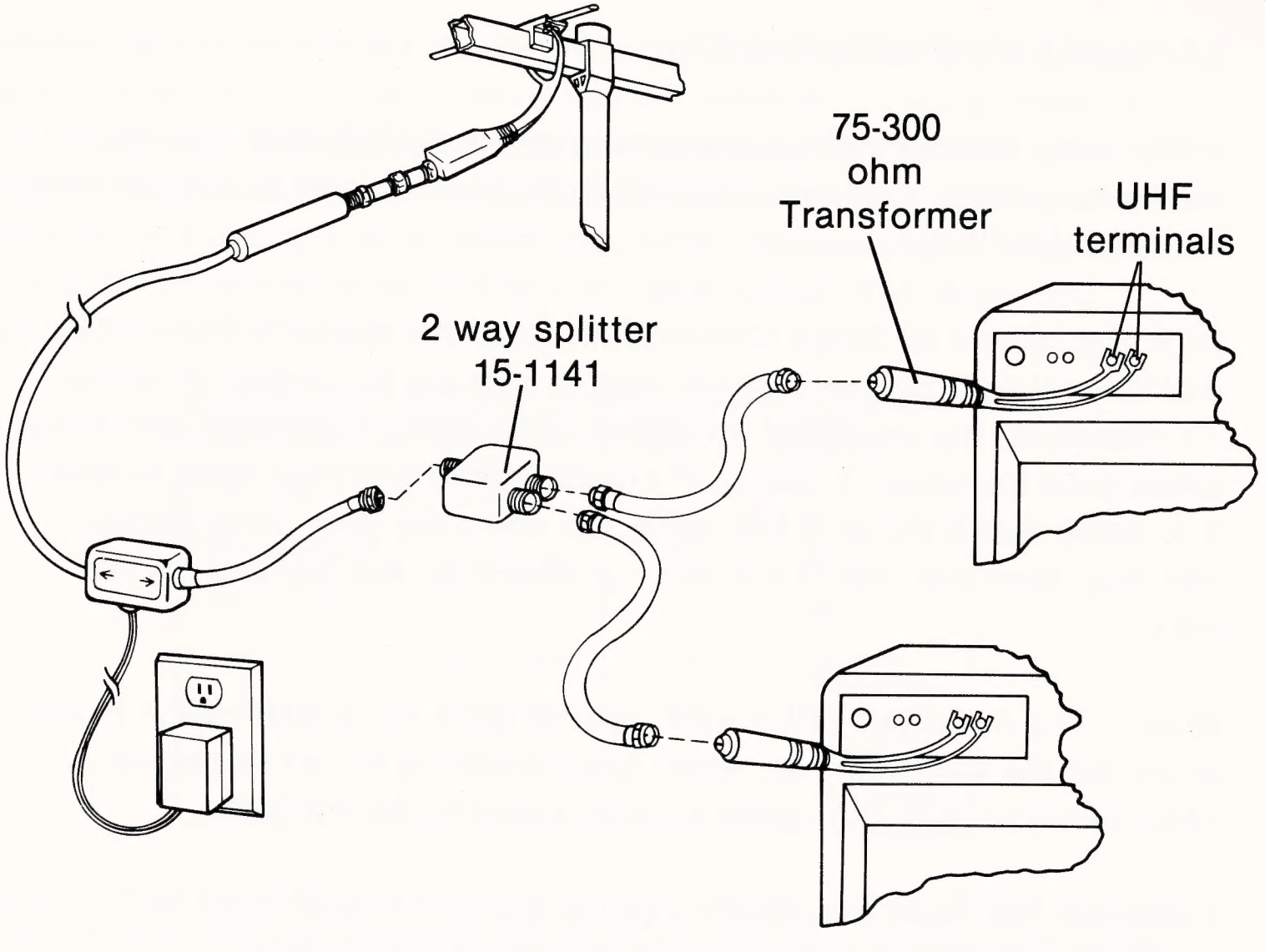
Note: The In-Line Amplifier is designed for use with standard F-type connectors. For some antenna systems or with certain scanners, you may require additional adapters or special cable. For example, many UHF scanners are used with antennas that terminate in a PL-259, Motorola or BNC plug. It is important to first determine exactly which connectors or adapters you will need to enable insertion of the In-Line Amplifier into the antenna cable lead. Your local Radio Shack store can provide assistance in this regard.

ONE ANTENNA TO TWO RECEIVER SYSTEMS

If you are using one TV-UHF antenna with two TV sets or a single UHF scanner antenna with more than one scanner, refer to Figure B for connections. To ensure proper operation without damage to any product, note the following:

1. Connections for the TV antenna as well as the TV set or first scanner/radio are the same as shown in Figure A. The same precautions apply. The need for additional adapters for antenna compatibility may also be true. Always check first to be sure.

2. The Power Injector Module must be installed between the In-Line Amplifier and the 75 ohm splitter (Cat. No. 15-1141).


75-300
ohm
Transformer
UHF
terminals
2 way splitter
15-1141

SATELLITE TV SYSTEMS (HSTV)

When early home satellite systems were designed, they had the ability to provide only one channel from one satellite to one receiver serving one TV set.

With the advent of Block Conversion, Satellite systems that offer multiple (slave) receivers which supply signals to several different TV monitors, the potential for signal loss through splitters and long cable runs becomes a reality. If coaxial cable lines are split to feed 4 or more receivers or if the cable run from the dish must exceed 350 feet, then the use of the In-Line Amplifier will restore signal loss.

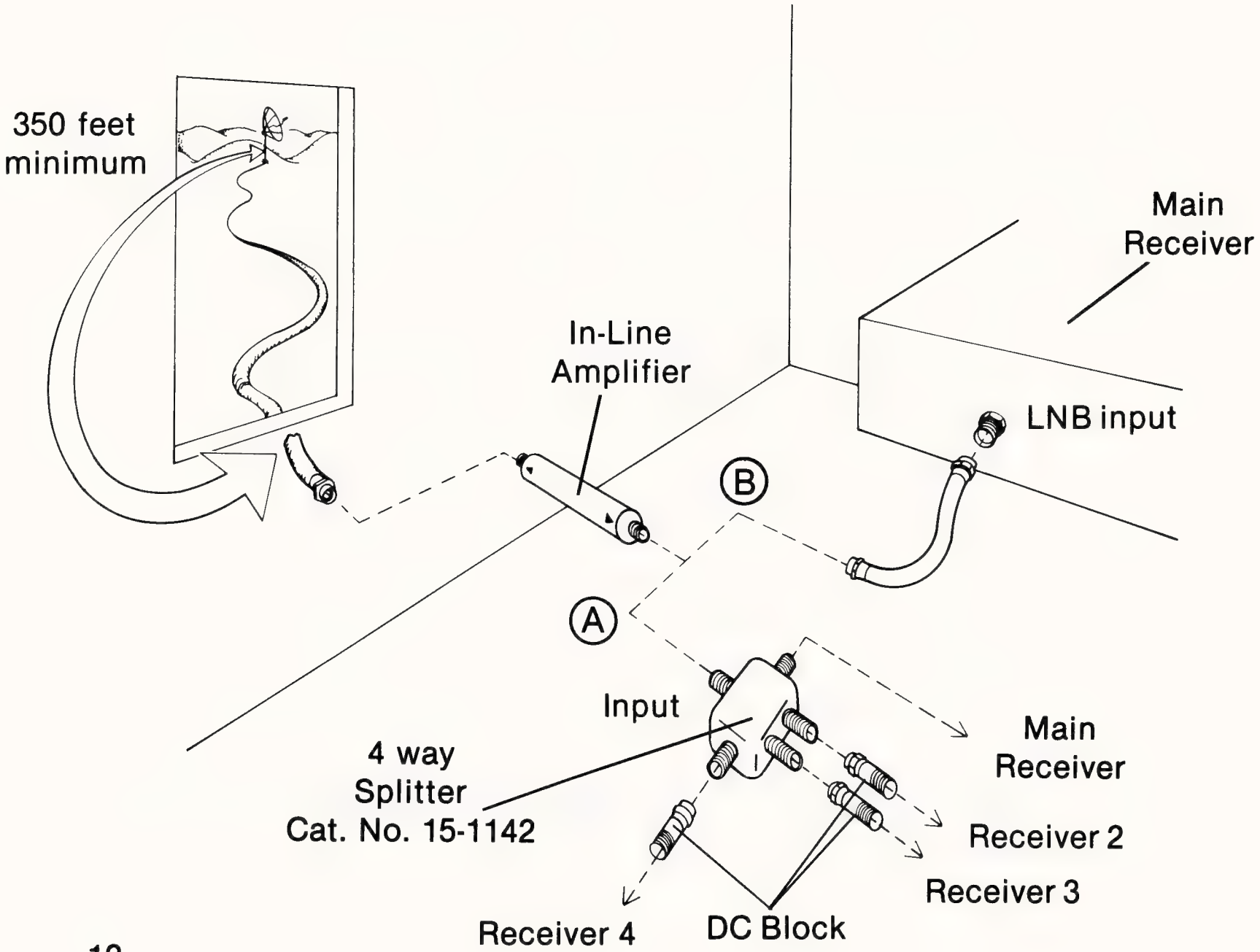
Note: The Amplifier WILL NOT compensate for a dish which is too small for the location. Nor will it help make up for an inadequate LNB, receiver, mis-alignment or poor tracking of the dish.

The chart has been prepared to guide you as to your need for amplification based on your combination of cable feeds and/splitters.

The placement of the In-Line Amplifier is based upon the length of cable initially connected to the antenna, whether or not a splice is used to extend the cable or if the extra distance is reached when entry is made into the house. It is better to install the unit inside as opposed to burying it in a splice assembly. However, it is preferable to use the Amplifier after 350 feet of cable rather than after 500 feet, even if the 500 feet brings it indoors.

TOTAL DISTANCE ANT. TO RECR(S) CABLE RUN	USING 2 WAY SPLTTR	USING 4 WAY SPLTTR	USE 15-1115 IN LINE	WHERE TO INSTALL
LESS THAN 350 FT	NO	NO	NO	N/A
LESS THAN 350 FT	YES	NO	NO	N/A
400-500 FT	NO	NO	YES	200-300 FT FROM DISH
350-500 FT	YES	NO	YES	UP TO 350 FT FROM DISH
250-400 FT	NO	YES	YES	UP TO 350 FT FROM DISH

Note: When installed in a satellite antenna system, the DC Block and the Power Injector Module are **not used**. Power is derived from the same power that supplies the LNB.


350 feet
minimum
Main
Receiver
In-Line
Amplifier
LNB input
B
A
Input
4 way
Splitter
Cat. No. 15-1142
Main
Receiver
Receiver 2
Receiver 3
Receiver 4
DC Block

12 Channel Multiple Receiver Hookup

The example illustrates two situations which would benefit from the use of the In-Line Amplifier.
The distance from the antenna to the first receiver or splitter is at least 350 feet. Then, in case A, the signal is being fed to a 4 way splitter which in turn is feeding the main receiver and three more slave units. Note that each slave receiver should have a DC block installed before its input.
In case B, while the signal is going to only the main receiver, the distance requirement is the prime consideration for using the In-Line amplifier.
In both cases, the amplifier is located within the home.

PROBLEM SOLVING

If the TV or UHF receiver does not operate correctly after installation of the In-Line Amplifier:

- Immediately unplug the power injector
- Check all connections and compare them with the appropriate installation drawing in this manual.

If no problems are found in the connections:
Plug in the power injector and try the TV or radio once more. If possible, substitue another TV and/or another antenna to eliminate each from suspicion.

If the foregoing do not alleviate the situation, please contact your nearest Radio Shack store for further assistance or service.

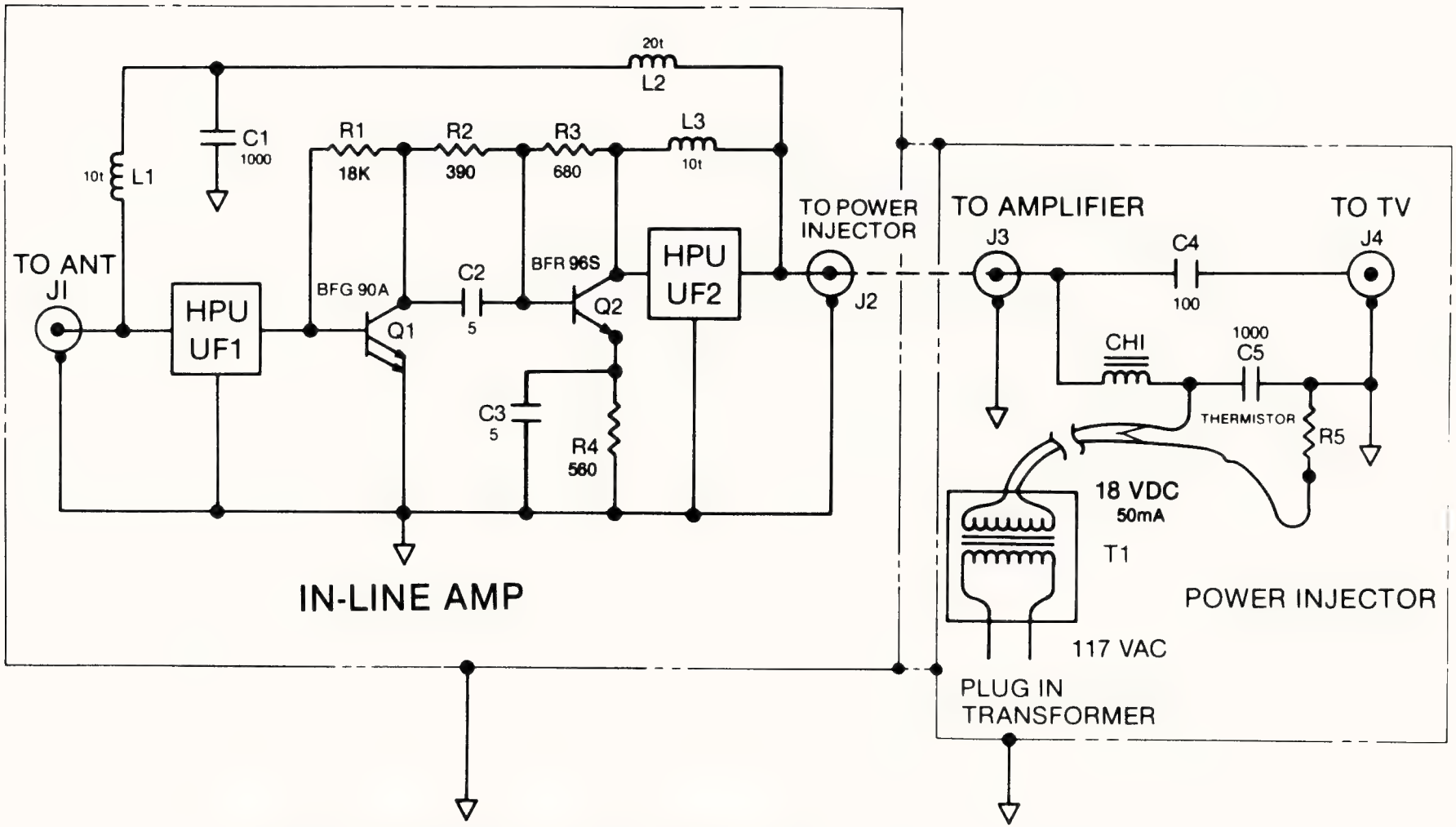
SPECIFICATIONS

Amplifier

Frequency:	430-1430 MHz	
Gain:	430- 930 MHz	20dB min
	930-1430 MHz	12dB min
Input Capability:	1 dB Compression point: 95 dB uV	
Noise Figure:	430-930 MHz 3.5 dB max	
	930-1430 MHz 5.0 dB max	
D.C. Voltage In:	24 VDC max, 12 VDC min.	

Power Injector

Input Voltage:	120 VAC 60 Hz
Output Voltage:	18 VDC +/- 1 V
Output max:	50 mA
Insertion Loss max:	2 dB



NOTE: ALL RESISTORS ARE ¼W UNLESS NOTED
ALL RESISTANCE VALUES ARE INDICATED IN OHMS

$K=10^3$ OHMS

ALL CAPACITANCE VALUES ARE INDICATED IN 10^{-12} FARADS

RADIO SHACK LIMITED WARRANTY

This product is warranted against defects for 90 days from date of purchase from Radio Shack company-owned stores and authorized Radio Shack franchisees and dealers. Within this period, we will repair it without charge for parts and labor. Simply **bring your Radio Shack sales slip** as proof of purchase date to any Radio Shack store. Warranty does not cover transportation costs. Nor does it cover a product subjected to misuse or accidental damage.

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